

in the midst of all the Colours is the confine of green and blue. And hence I seem to collect that the thick-  
nesses of the Air between the Glasses there, where the  
Ring is successively made by the limits of the five prin-  
cipal Colours (red, yellow, green, blue, violet) in order  
(that is, by the extreme red, by the limit of red and  
yellow in the middle of the orange, by the limit of  
yellow and green, by the limit of green and blue, by  
the limit of blue and violet in the middle of the in-  
digo, and by the extreme violet) are to one another  
very nearly as the six lengths of a Chord which sound  
the notes in a sixth Major, *sol, la, mi, fa, sol, la*. But  
it agrees something better with the Observation to say,  
that the thickneses of the Air between the Glasses there,  
where the Rings are successively made by the limits of  
the seven Colours, red, orange, yellow, green, blue, in-  
digo, violet in order, are to one another as the Cube-  
roots of the Squares of the eight lengths of a Chord,  
which sound the notes in an eighth, *sol, la, fa, sol, la,  
mi, fa, sol*; that is, as the Cube-roots of the Squares  
of the Numbers,  $1, \frac{8}{27}, \frac{5}{6}, \frac{3}{4}, \frac{2}{3}, \frac{3}{5}, \frac{9}{16}, \frac{1}{2}$ .

## O B S. XV.

These Rings were not of various Colours like those  
made in the open Air, but appeared all over of that  
prismatic Colour only with which they were illu-  
minated. And by projecting the prismatic Colours  
immediately upon the Glasses, I found that the Light  
which fell on the dark Spaces which were between  
the coloured Rings, was transmitted through the  
Glasses without any variation of Colour. For on a  
white

white Paper placed behind, it would paint Rings of  
the same Colour with those which were reflected, and  
of the bigness of their immediate Spaces. And from  
thence the origin of these Rings is manifest; namely,  
That the Air between the Glasses, according to its va-  
rious thickness, is disposed in some places to reflect,  
and in others to transmit the Light of any one Co-  
lour (as you may see represented in the fourth Figure) *Fig. 4.*  
and in the same place to reflect that of one Colour  
where it transmits that of another.

## O B S. XVI.

The Squares of the Diameters of these Rings made  
by any prismatic Colour were in arithmetical pro-  
gression as in the fifth Observation. And the Diameter  
of the sixth Circle, when made by the citrine yellow,  
and viewed almost perpendicularly, was about  $\frac{58}{100}$  parts  
of an Inch, or a little less, agreeable to the sixth Ob-  
servation.

The precedent Observations were made with a rarer  
thin medium, terminated by a denser, such as was Air  
or Water compressed between two Glasses. In those  
that follow are set down the appearances of a denser  
medium thin'd within a rarer, such as are plates of  
Muscovy-glass, Bubbles of Water, and some other thin  
substances terminated on all sides with Air.